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ABSTRACT

A model for evaluating agricultural teacher education programs was developed and tested. The quality of the program was indicated by members of the profession, who were asked to list, in rank order, the top 10 college programs and to give reasons for their rankings. Program rankings were also compared with the faculty rank of the respondents, geographic region of the respondent, and region of the institution in which the respondent earned the doctorate. One hundred and sixty-two agricultural teacher educators were mailed the Survey of Teacher Education Perceptions, and 112 usable questionnaires were returned. The top 20 colleges were Ohio State University, Iowa State University, Virginia Tech, Texas A&M University, Pennsylvania State University, Mississippi State University, University of Minnesota, Cornell University, Oklahoma State University, University of Florida, University of Missouri, University of Illinois, University of Arizona, Louisiana State University, University of Nebraska, Purdue University, University of California-Davis, Michigan State University, California Polytechnic State University-San Luis Obispo, and Colorado State University. The reported ranking criteria included: faculty; research, publications, and scholarship; overall program; graduate program and graduates; and undergraduate program. Geographic factors suggested importance of a school's nationwide visibility. (GDC)

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A Model For Evaluating The Sources
Of Professional Esteem For
Vocational Teacher Education Programs

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A Model For Evaluating The Sources Of Professional Esteem
For Vocational Teacher Education Programs

Quality . . . you know what it is, yet you don't know what it is. But that's self contradictory. But some things are better than others, that is, they have more quality. But when you try to say what the quality is, apart from the things that have it, it all goes poof! There's nothing to talk about. But if you can't say what Quality is, how do you know what it is, or how do you know that it even exists? If no one knows what it is, then for all practical purposes it doesn't exist at all. But for all practical purposes it really does exist. What else are grades based on? Why else would people pay fortunes for some things and throw others in the trash pile? Obviously some things are better than others . . . but what's the "betterness"? . . . So round and round you go, spinning mental wheels and nowhere finding anyplace to get traction. What the hell is Quality? What is it?

Robert M. Pirsig
Zen and the Art of
Motorcycle Maintenance

Excellence, like quality, is a difficult construct, not only to measure but also to attain. Striving for academic excellence, however, is a worthy goal for colleges and universities, as well as for divisions and departments within those institutions. Clearly, the same is true of teacher education programs in vocational education across the country. In a study that determined 68 critical issues facing vocational teacher education, (Zellner & Parrish, 1986) seven out of the top 10 were directly related to the "quality aspects" of vocational teacher education. Respondents to the survey implemented by the teacher education and staff development committee of the American Vocational Association cited such terms as recruitment, image, attractiveness of the profession, and technological

enhancement as major points of influence that need to be addressed in the association's future activities. However, unlike other disciplines in education, vocational teacher education, has not designed nor implemented a model, instrument or strategy for evaluating its professional quality or esteem (Satterwhite, 1983). Vocational service areas have not been without guidance in determining their program emphasis. The various service areas have established standards and criteria for evaluation. This was mainly due to the enactment of the Vocational Act of 1963 which allocated funds specifically for program evaluations of state and local programs to assess their relevance and quality (Satterwhite, 1983). The evaluation aspects of the 1963 Act parallel in many respects, much of the current movement for teacher education reform.

Finn (1981), in his stirring article, "Toward a New Consensus," stressed that the unifying idea for a national consensus on education must be that of quality. Among 10 precepts Finn (1981) proposed for the establishment of a new consensus, teacher education is most important.

... because the indispensable ingredient of educational excellence is high-quality instruction by talented and well-trained teachers, the highest priority of American education in the years ahead must be the recruitment, selection, preparation, and retention of outstanding instructional personnel at every level from kindergarten through graduate school. The declining quality of those entering and staying in teaching poses the gravest long-term threat to the quality of the educational enterprise. (p. 62)

4

The Holmes Group (1986) reaffirmed the importance of attracting high-quality students to undergo a more rigorous

preparation and training for the eventual establishment in a career in teaching, at secondary, postsecondary, or college level.

The recruitment of these high-quality students into the profession is an important consideration if vocational teacher education is to prosper in an upcoming time of speculation and evaluation. According to Zellner and Parrish (1986), of the 68 identified issues noted by vocational educators, "Recruiting highly competent and committed persons" (p. 39) was identified as the most critical issue facing vocational teacher education. As prospective teachers are considering whether to major in a vocational discipline, what criteria can they consider when selecting an institution to attend? The answer, in at least one study was academic quality (Krukowski, 1985). Students are more eager to pay for and attend a college with the reputation or programs they believe will lead to high paying jobs and top professional schools. However, the school's perceived prestige, rather than some other measure of its academic quality, may be what attracts students to the institution. Selection of an institution to attend is sometimes based on studies which rank or identify outstanding colleges or programs located within universities. This is one of a number of methods Webster (1981) identifies for assessing program quality.

Perhaps the best known effort in establishing a reputational study was the one conducted by Alan Cartter (1966). His research on graduate programs was based on ratings from 4,000 scholars from more than 100 universities.

The assumption made by the study was, the higher the degree of agreement among experts, the greater the possibility their opinion is accurate. Frohreich and Sims (1973) conducted a study to rank departments of educational administration. They identified criteria that were important for judging programs, e.g., quality of students, eminence of faculty, support services, and size of faculty. Margulies and Blau (1973) conducted a reputational study which resulted in the ranking of 17 types of professional programs. As respondents, the deans of the professional schools were asked to identify the five most outstanding schools in their own profession. Studies such as the ones previously mentioned are noticeably absent from the profession of vocational teacher education. Moore's (1982) analysis of the scholarly productivity of agricultural education teacher educators and Satterwhite's (1983) ranking of marketing teacher education programs are the only studies known to the authors which recognize professional esteem as a contribution to the literature base in vocational education.

Purpose of the Study

The purpose of this study was to accomplish the following objectives:

1. To develop a model for evaluating the esteem held for vocational teacher education programs by members of the profession;
2. To test the model by:
 - A. identifying the top 10 agricultural teacher education programs in the United States and

B. determining what criteria agricultural teacher educators use in rating the top 10 agricultural teacher education programs.

3. To determine the rankings of the programs based upon the respondents faculty rank, current American Association of Teacher Educators in Agriculture (AATEA) region of the respondent, and AATEA region of institution in which respondent earned doctorate.

Procedures

An instrument entitled "A Survey of Teacher Education Perceptions" was developed for the study, based on a review of the reputational literature and validated by a panel of teacher educators in both agricultural education and in other vocational service areas. It was field tested on a second, similar panel of teacher educators. The final instrument consisted of three sections: a section of demographics judged to be of interest in analyzing the results as specified in question 3 above; a section asking for the respondent to list, in rank order, the top 10 institutions, as he or she perceives them, and give reasons for the rankings; and a section asking similar information regarding individual teacher educators. This paper deals only with the program ratings and reasons.

The population for the study was defined as all agricultural teacher educators, $n=324$, listed by Rogers (1985), with names of non-teacher educators excluded. Using interpolation in the Warmbrod (1965) procedure for determining sample size, it was determined that a sample of

n=162 would be appropriate. A systematic procedure with a random start was used to select the sample for the study.

In order to avoid biasing the results of the study, a system to insure the anonymity of the researchers was developed. Neither the mailing address of the institution collecting the data, nor any reference to its name was made on the outside envelope, cover, letter, or return envelope. Dr. Larry D. Case, Education Program Specialist, Agriculture, Office of Vocational and Adult Education, United States Department of Education, agreed to assist by mailing pre-stamped envelopes from his Alexandria, Virginia office, and to receive the completed surveys and return them to the researchers. He also agreed to write a cover letter explaining the need for anonymity of the researchers and assuring participants that the study was legitimate. In order to avoid the appearance that the study was officially sanctioned by the Department of Education, the cover letter was typed on plain stationery, with Dr. Case's name but without an official title.

After two follow-ups, a total of 125 responses were received, for a total return rate of 77.2%; however, a small number of the surveys returned were not usable. The usable return rate was 69.1% (n=112). Because of the need for anonymity, no telephone follow-up was conducted.

Analysis of Data

The reasons were analyzed using content analysis techniques with calculations done manually. The numerical data were analyzed using SAS descriptive statistics

procedures to determine rankings. Ratings of institutions were weighted from 0 (not mentioned) to 10 (rated first), for each respondent.

To determine least significant difference (LSD) between mean ratings, the following procedure was used. First, the hypothesis of homogeneity of variance was tested for the mean ratings among the top 10 programs (Hinkle, Wiersma, & Jurs, 1979), see table 2. That was tested using an F-ratio computed using the $\text{Max } s^2 / \text{Min } s^2$, which produced $F=2.528$, which was not significant. Then assuming homogeneity of variance, the pooled variances were taken (Hinkle, et al, 1979), producing a pooled standard deviation of 3.477. The standard error of the means resulting from that operation was 0.328. Multiplying that figure (Pedhauzer, 1992) by the value of $t=1.96$, where $p(t) < .05$, produced a LSD of 0.644.

Results

Top Programs

The minimum requirement for inclusion in the computation was for a program to be named among the top 10 by at least three respondents. The mean ratings for such named institutions ranged from .038 to 6.314. The mean ratings for the first and second ranked institutions (6.696 and 5.277, respectively) were clearly and significantly different both from each other and from the other members of the top 10; however, the third through 10th institutions were grouped more closely to each other (3.536 to 1.872, respectively), where the least significant difference was 0.644 ($p < .05$).

Table 1 indicates that Ohio State was ranked highest

with a mean rating of 6.696. Iowa State was ranked second with a mean rating of 5.27. Also making the top 10 programs, in order were Virginia Tech, Texas A & M, Pennsylvania State, Mississippi State, University of Minnesota, Cornell, Oklahoma State, and University of Florida. The latter eight programs had a range in mean scores from 3.536 to 1.872.

TABLE 1

Overall Rankings and Rank Means for Top 10 Agricultural Teach
Education Programs (n=112)

Rank	Programs	Mean	S. D.
1	Ohio State University	6.696	4.280
2	Iowa State University	5.277	3.907
3	Virginia Tech	3.536	3.523
4	Texas A & M University	3.500	3.304
5	Pennsylvania State University	2.964	3.561
6	Mississippi State University	2.955	3.473
7	University of Minnesota	2.714	3.405
8.5	Cornell University	2.429	3.098
8.5	Oklahoma State University	2.429	3.284
10	University of Florida	1.872	2.692

Notes:

a) Based on a scale rank where 1st=10, 2nd=9, ... unranked=0.

b) Least Significant Difference=0.644 ($P < .05$) given

homogeneity of variance and a pooled S.D. of

3.477.

The eleventh through twentieth ranked programs were as follows: (11) University of Missouri, (12) University of Illinois, (13) University of Arizona, (14) Louisiana State University, (15) University of Nebraska, (16) Purdue University, (17) University of California-Davis, (18) Michigan State University, (19) California Polytechnic State University-San Luis Obispo, and (20) Colorado State University.

Criteria Used

Table 2 indicates that faculty was the primary criterion used by agricultural teacher educators in ranking peer programs. The category research/publications and scholarship was ranked second with overall program ranked third. Graduate programs/graduates were ranked fourth with undergraduate programs ranked fifth.

TABLE 2

Rankings of Criteria Used by Agricultural Teacher Educators to Rank Peer Programs

Rank	Criteria	Number of times Used
1	Faculty	328
2	Research/Publications/Scholarship	168
3	Overall Program	129
4	Graduate Program/Graduates	97
5	Undergraduate Program	91

The faculty criterion had several specific comments concerning faculty such as "reaches beyond state," "responsibilities within profession," "high quality faculty," and "professional integrity." Among the single word modifiers used to describe faculty were size, hardworking, leadership, creative, and courage.

For the criterion research/publications/scholarship several specific descriptions were also used. Among these descriptions were visibility, amount, national program involvement, productivity, and capabilities.

Faculty Rank

Differences were found among respondents' faculty ranks and their mean ratings of agricultural teacher education programs. Ohio State and Iowa State were ranked first and second, respectively by respondents in all three ranks of assistant, associate, and full professor. On the other hand, Virginia Tech was ranked third, fourth, and fifth, respectively by respondents in each rank starting with assistant professor.

Three institutions not named in the top 10 overall are also recognized in Table 3. Louisiana State University was ranked 10th by assistant professors and 14th overall. The University of Illinois was ranked 8.5 by full professors and 12th overall. The University of Missouri was ranked 10th by full professors and 11th overall.

TABLE 3

Rankings of Agricultural Teacher Education Programs by Faculty
Rank of Respondents

Overall		Faculty rank		
		Assistant	Associate	Full
Rank	Programs	Professor	Professor	Professor
		(n=24)	(n=37)	(n=46)
1	Ohio State University	1	1	1
2	Iowa State University	2	2	2
3	Virginia Tech	3	4	5
4	Texas A & M University	7	3	4
5	Pennsylvania State Univ.	6	6	8.5
6	Mississippi State Univ.	5	5	6
7	University of Minnesota	9	8	3
8.5	Cornell University	4	10	7
8.5	Oklahoma State Univ.		7	
10	University of Florida	8	9	
11	University of Missouri			10
12	University of Illinois			8.5
14	Louisiana State Univ.	10		

AATEA Regions

Table 4 indicates a variation based on respondents' AATEA regions (Figure 1.) in their rankings of agricultural teacher education programs. No program received the same ranking from respondents in all four regions. Ohio State was

A map of the United States with states shaded in three different patterns: horizontal lines, a grid, and solid black. The horizontal lines cover the western and central US, the grid covers the northern central US, and the solid black covers the Northeast and parts of the South.

 SOUTHERN
WESTERN

ranked first in the central, eastern, and southern regions but third in the western region. Iowa State was ranked first by the western region respondents and second by respondents in the other three regions. Pennsylvania State, Oklahoma State, and University of Florida were ranked among the top 10 by respondents in three of the four regions.

TABLE 4

Rankings of Programs by Current AATEA Region of Respondent

Overall		Central	Eastern	Southern	Western
Rank	Programs	(n=36)	(n=20)	(n=40)	(n=16)
1	Ohio State University	1	1	1	3
2	Iowa State University	2	2	2	1
3	Virginia Tech	3	4	3	6
4	Texas A & M University	6	7	4	2
5	Pennsylvania State Univ.	4	3	8	
6	Mississippi State Univ.	7	8	5	8
7	University of Minnesota	5	9	9	7
8.5	Cornell University	8	5	7	9
8.5	Oklahoma State Univ.	10		6	4
10	University of Florida		6	10	10
11	University of Missouri	9			
12	University of Illinois		10		
13	University of Arizona				5

Three programs not in the top 10 are also recognized in Table 4. The University of Missouri, ranked 11th overall,

was ranked ninth by respondents in the central region. The University of Illinois, ranked 12th overall, was ranked 10th by respondents in the eastern area. The University of Arizona ranked 13th overall, but was ranked fifth by respondents in the western region.

Region of Earned Doctorate

Table 5 shows the rankings of programs by AATEA regions of respondents' doctoral degree granting institution. Ohio State was ranked first among respondents from three regions and 3rd in the western region. Iowa State was ranked second in the central region, fourth in the eastern and southern regions, and fifth in the western region. Pennsylvania State and Cornell tied for second in the eastern region. Texas A & M was ranked second by doctoral degree recipients from the southern region. Oklahoma State and the University of Arizona tied for first in the western region.

There was a large difference in the number of respondents obtaining doctoral degrees from the four regions. The largest was the central region with 50 respondents. The smallest was the western region with five respondents.

Conclusions

The most important criterion used for rating programs of agricultural teacher education was associated with the people in the specific programs. It was concluded that the "people factor", represented by the faculty members and their associated public accomplishments, such as research, publications, and scholarship most influenced the peer respondents. Another important people factor was represented

TABLE 5

Rankings of Programs by AATEA Region of Institutions Granting
Respondent's Doctorate

Rank	Programs	Central	Eastern	Southern	Western
		(n=50)	(n=20)	(n=23)	(n=5)
1	Ohio State University	1	1	1	3
2	Iowa State University	2	4	4	5
3	Virginia Tech	3	6	3	
4	Texas A & M University	6	5	2	8
5	Pennsylvania State Univ.	8	2.5	7	
6	Mississippi State Univ.	5	8	5	4
7	University of Minnesota	4	7	10	
8.5	Cornell University	10	2.5		
8.5	Oklahoma State Univ.	7		6	1.5
10	University of Florida	9	10	8	
12	University of Illinois		9		
13	University of Arizona				1.5
14	Louisiana State University			9	
19	Cal Poly, San Luis Obispo				9
20	Colorado State University				7
27	Montana State University				6

by the graduate program, undergraduate program, and graduates of the program. It was concluded that factors other than people, such as prestige of the institution and impressive campus facilities did not influence the peer

perceptions.

Peer ratings across faculty rank of respondent were quite stable for the top five programs. None of these programs was rated outside the top 10 by any of the three respondent categories. Much less stability was shown for the programs rated sixth through fourteenth, with notable variability in ratings across faculty rank of respondent.

Peer ratings across AATEA region of respondent was quite stable for the top five programs. Only one program was rated outside the top 10 by respondents in any of the four regions. Programs rated sixth through thirteenth were less stable, with some being listed in the top 10 by respondents in only one region.

Program rankings were fairly stable across AATEA region of institution granting the respondents' doctorate, but less so than on the two previous variables. Two of the top five programs were rated outside the top 10 by respondents with degrees from one region. Notably, one region's respondents rated three programs among the top 10, which were not rated by any of the other regions' respondents. The small number of respondents with degrees from the Western region should be noted. Clearly, the region from which the respondent received the doctoral degree affected the ratings of programs.

Overall, it was concluded that people in programs most influenced the program rankings. Additionally, in order to be rated among the top programs in agricultural education, an institution must develop a broad-based approach to secure

national visibility of those people in scholarly and leadership roles.

Recommendations

All vocational service area teacher education programs could utilize the pragmatic evaluation model established in this study. It should work equally well for an across-the-board evaluation of teacher education programs for specific service area evaluations.

Vocational teacher education programs seeking greater prestige should put their resources into promoting faculty visibility among members of the profession. Secondly, resources should be used to encourage publications and national and regional presentations on the part of faculty members.

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